

2023-1463

United States Court of Appeals
for the Federal Circuit

GESTURE TECHNOLOGY PARTNERS, LLC
Appellant,

v.

APPLE INC., LG ELECTRONICS INC., LG ELECTRONICS USA, INC.,
GOOGLE LLC,
Appellees

Appeal from the United States Patent and Trademark Office in *Inter Partes*
Review Nos. IPR2021-00922, IPR2022-00090, and IPR2022-00360 – U.S.
Patent No. 8,553,079

REPLY BRIEF OF APPELLANT
GESTURE TECHNOLOGY PARTNERS, LLC

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PATENT CLAIMS AT ISSUE

Pursuant to FED. CIR. R. 28(a)(12) the patent claims at issue include claims 1-6, 8-16, 18-26, and 28-30 of U.S. Patent No. 8,553,079.

1. A computer implemented method comprising:

providing a light source adapted to direct illumination through a work volume above the light source;

providing a camera oriented to observe a gesture performed in the work volume, the camera being fixed relative to the light source; and

determining, using the camera, the gesture performed in the work volume and illuminated by the light source.
2. The method according to claim 1 wherein the light source includes a light emitting diode.
3. The method according to claim 1 wherein the light source includes a plurality of light emitting diodes.
4. The method according to claim 1 wherein detecting a gesture includes analyzing sequential images of the camera.
5. The method according to claim 1 wherein the detected gesture includes at least one of a pinch gesture, a pointing gesture, and a grip gesture.
6. The method according to claim 1 further including determining the pointing direction of a finger in the work volume.
8. The method according to claim 1 further including determining the three-dimensional position of a point on a user.
9. The method according to claim 1 wherein the camera and the light source are positioned in fixed relation relative to a keypad.
10. The method according to claim 9 the camera, the light source and the keypad form part of a laptop computer.

11. A computer apparatus comprising:
 - a light source adapted to illuminate a human body part within a work volume generally above the light source;
 - a camera in fixed relation relative to the light source and oriented to observe a gesture performed by the human body part in the work volume; and
 - a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output.
12. The computer apparatus of claim 11 further including a display and a keyboard, wherein the work volume is above the keyboard and in front of the display.
13. The computer apparatus of claim 12 wherein the display is pivotable relative to the keyboard.
14. The computer apparatus of claim 11 wherein the light source includes a light emitting diode.
15. The computer apparatus of claim 11 wherein the light source includes a plurality of light emitting diodes.
16. The computer apparatus of claim 12 wherein the display includes a three-dimensional display.
18. The computer apparatus of claim 11 wherein the determined gesture includes a pinch gesture.
19. The computer apparatus of claim 11 wherein the determined gesture includes a pointing gesture.
20. The computer apparatus of claim 11 wherein the determined gesture includes a grip gesture.

21. A computer implemented method comprising:

providing a camera oriented to observe a gesture performed in a work volume above the camera;

providing a light source in fixed relation relative to the camera and adapted to direct illumination through the work volume; and

detecting, using the camera, a gesture performed by at least one of a user's fingers and a user's hand in the work volume.
22. The method according to claim 21 wherein the light source includes a light emitting diode.
23. The method according to claim 21 wherein the light source includes a plurality of light emitting diodes.
24. The method according to claim 21 wherein detecting a gesture includes analyzing sequential images of the camera.
25. The method according to claim 21 wherein the detected gesture includes at least one of a pinch gesture, a pointing gesture, and a grip gesture.
26. The method according to claim 21 further including determining the pointing direction of one of the user's fingers using the first and second cameras.
28. The method according to claim 21 further including determining the three-dimensional position of a point on at least one of the user's hand and the user's fingers.
29. The method according to claim 21 further including providing a three-dimensional display viewable by the user.
30. The method according to claim 21 wherein the camera and the light source are positioned in fixed relation relative to a keypad.

FORM 9. Certificate of Interest

Form 9 (p. 1)
March 2023

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

CERTIFICATE OF INTEREST

Case Number 2023-1463

Short Case Caption Gesture Technology Partners, LLC v. Apple Inc.

Filing Party/Entity Gesture Technology Partners, LLC

Instructions:

1. Complete each section of the form and select none or N/A if appropriate.
2. Please enter only one item per box; attach additional pages as needed, and check the box to indicate such pages are attached.
3. In answering Sections 2 and 3, be specific as to which represented entities the answers apply; lack of specificity may result in non-compliance.
4. Please do not duplicate entries within Section 5.
5. Counsel must file an amended Certificate of Interest within seven days after any information on this form changes. Fed. Cir. R. 47.4(c).

I certify the following information and any attached sheets are accurate and complete to the best of my knowledge.

Date: 12/18/2023

Signature: /s/ Fred I. Williams

Name: Fred I. Williams

FORM 9. Certificate of Interest

Form 9 (p. 2)
March 2023

1. Represented Entities. Fed. Cir. R. 47.4(a)(1).	2. Real Party in Interest. Fed. Cir. R. 47.4(a)(2).	3. Parent Corporations and Stockholders. Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities. <input checked="" type="checkbox"/> None/Not Applicable	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities. <input checked="" type="checkbox"/> None/Not Applicable
Gesture Technology Partners, LLC		

☐ Additional pages attached

FORM 9. Certificate of Interest

Form 9 (p. 3)
March 2023

4. Legal Representatives. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

☒ None/Not Applicable ☐ Additional pages attached

5. Related Cases. Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

☒ Yes (file separate notice; see below) ☐ No ☐ N/A (amicus/movant)

If yes, concurrently file a separate Notice of Related Case Information that complies with Fed. Cir. R. 47.5(b). **Please do not duplicate information.** This separate Notice must only be filed with the first Certificate of Interest or, subsequently, if information changes during the pendency of the appeal. Fed. Cir. R. 47.5(b).

6. Organizational Victims and Bankruptcy Cases. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

☒ None/Not Applicable ☐ Additional pages attached

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STATEMENT OF RELATED CASES

Pursuant to Federal Circuit Rule 47.5, Appellant Gesture Technology Partners, LLC states that no other appeal in or from the same civil action in the lower court was previously before this or any other appellate court.

Cases pending in this or any other court which will directly affect or be directly affected by this Court's decision in the pending appeal are listed below.

- *Gesture Technology Partners, LLC v. Apple Inc.*, Case No. 4:22-cv-04806 (N.D. Cal.)
- *Gesture Technology Partners, LLC v. LG Electronics, Inc.*, Case No. 2:21-cv-19234 (D.N.J.)
- *Gesture Technology Partners, LLC v. Motorola Mobility LLC*, Case No. 1:22-cv-03535 (N.D. Ill.)
- *Ex Parte Reexamination* No. 90/014,900 of U.S. Patent No. 8,553,079, before the USPTO (reexam ordered December 20, 2021; notice of appeal to the Patent Trial and Appeal Board, under 35 U.S.C. § 134, filed on August 29, 2022).

SUMMARY OF THE ARGUMENT

As articulated in Patent Owner's opening brief, the Board made several erroneous findings, unsupported by substantive evidence, that compel reversal. As to Petitioner's rebuttal arguments, they are all unavailing. The Board improperly construed the timing of the light source during the performance of the gesture in independent claims 1, 11, and 21 of the '079 Patent. The Board committed reversible error when it found claims 1, 11, and 21 of the '079 Patent unpatentable over *Numazaki* and the knowledge of a PHOSITA. Because the FWD's findings as to

independent claims 1, 11, and 21 are not supported by substantial evidence, the same conclusion applies to dependent claims 2, 4-6, 8-10, 12-14, 16, 18-19, 22, 24-26, and 28-30 of the '079 Patent. Thus, the Board's FWD should be vacated and remanded with the proper construction of the timing of the light source.

Next, the Board improperly construed the operation of the light source claims 3, 15, and 23 of the '079 Patent. The Board committed reversible error when it found claims 3, 15, and 23 of the '079 Patent unpatentable over *Numazaki* and *Numazaki* '863. Thus, the Board's FWD should be vacated and remanded with the proper construction of the operation of the light source.

The '079 Patent expired in November 2019, long before the IPR Petition was filed in 2021. Under *Oil States*, a patent grant is the grant of a public franchise. Once a patent expires, the franchisee may be entitled to collect damages from the public franchise that formerly existed through an infringement action in an Article III jurisdiction. However, the USPTO does not have jurisdiction over a petition for *inter partes* review against an expired patent because the public franchise no longer exists after patent expiration. Accordingly, upon expiration of the '079 Patent, the Board ceased to have jurisdiction over the '079 Patent, so the FWD should be vacated.

ARGUMENT

I. The Board Incorrectly Construed the Timing of “the light source” During the Performance of the Gesture in Independent Claims 1, 11, and 21.

Petitioner argues that the plain language of claims 1, 11, and 21 does not require constant illumination. Response Br. 31-32. But Patent Owner does not seek a construction that requires constant illumination. Rather, Patent Owner contends that the required illumination occurs during the determination of the gesture performed as recited in claim 1. Appx44 13:8-9 (“ . . . determining, using the camera, the gesture performed in the work volume and illuminated by the light source.”). The plain language of the claims, which are consistent with the specification, demonstrates that the Board’s construction is incorrect and Petitioner’s arguments on appeal are without merit. At a minimum, upon *de novo* review, the Board’s determinations should be remanded with the proper construction.

Petitioner argues that Patent Owner forfeited its challenge to the Board’s construction of “the light source” on appeal. Response Br. 31 (citing Appx226 and Appx231-232). Petitioner’s citations are to the claim construction of “wherein the light source includes a plurality of light emitting diodes,” which includes “the light source.” See Appx226 and Appx231-232. Patent Owner also presented this argument during the course of the *inter partes* review. See Appx232-233 (“But as discussed above, Numazaki requires two photo-detection units (i.e., two cameras)

and Numazaki's lighting unit (i.e., light source) is not active when one of the photo-detection units is capturing an image of the gesture. This is contrary to what is required by claim element [1(b)]."); *see also* Appx162-163 ("the second photodetection unit 110 detects while lighting unit 101 is not active. *Id.*, 11:30-32, Fig. 2. . . Numazaki teaches away because it requires that one of the photo-detection units capture with lighting unit 101 off (Ex. 1004, 11:30-32, Fig. 2), which is contrary to the claim, which requires "direct illumination."). Moreover, Patent Owner did not waive the claim construction argument because the Board incorrectly relied on a new construction for the first time in the FWD. *See Axonics, Inc. v. Medtronic, Inc.*, 75 F.4th 1374, 1381 (Fed. Cir. 2023) (finding that the Board must give a party an opportunity to respond to a new construction).

Petitioner argues that the examples provided by Patent Owner only state that multiple images are captured and fail to show constant illumination. Response Br. 34. But the examples articulated in Patent Owner's opening brief include claim 4's language that "detecting a gesture includes analyzing sequential images of the camera," Opening Br. 17 (quoting Appx44 13:14-15); claim 5's "wherein the detected gesture includes at least ... a pinch gesture," Opening Br. 17 (quoting Appx44 13:16-18); and an example describing "detect[ion]" of "sequential image sets such as the motion of the finger, or" a "pinching" gesture, Opening Br. 17-18 (quoting Appx39 3:48-51). Petitioner argues that these examples do not prevent the

capture of multiple images of a gesture while the lighting unit is turned off and on. Response Br. 34. But Petitioner’s argument ignores the recited language of independent claim 1 that requires the determination of a “gesture performed in the work volume and illuminated by the light source.” ’079 Patent, claim 1 (emphasis added). The claim element recites the determination of a “gesture performed,” not merely part of a gesture performed. Further, when the gesture is performed, the illumination by the light source is required because the claim language is “and,” not or.

Petitioner is incorrect that Mr. Occhiogrosso’s declaration is “silent on the constancy of the illumination.” *See* Response Br. 35. In fact, Mr. Occhiogrosso opined that a “POSITA would understand this disclosure to mean that the light source illuminates the gesture while the gesture is performed.” Appx1384-1385 ¶ 52 (emphasis added). Petitioner highlights that Apple’s expert opined that *Numazaki* discloses a gesture performed in the work volume illuminated by a lighting unit. Response Br. 35. That opinion does not, however, teach the determination step of claim 1. Rather, Apple’s expert opined that *Numazaki* was “oriented to observe a gesture performed in the work volume illuminated by [a] lighting unit.” Appx956-957 ¶ 43. *Numazaki* does not teach that the light source is on during the determination of the gesture performed.

Next, Petitioner conflates what is required by the '079 Patent claims and what is disclosed in *Numazaki*. Response Br. 36. The fact that *Numazaki* discloses taking multiple images of a gesture without constant illumination does not teach or suggest that *Numazaki*'s light source is on during the required determination of the gesture performed. Petitioner falsely asserts that Patent Owner does not explain why "illuminated by the light source" requires constant illumination. Response Br. 37. As articulated in the opening brief, Patent Owner's construction is supported by the claim language and the specification.

In view of the foregoing, the Board's improper construction of claim 1 should be reversed because the light source must be on for the duration of the gesture performed. Independent claims 11 and 21 recite similar limitations involving a light source. *See* Appx0018-Appx0019 ("Independent claim 11 is directed to a computer apparatus and is very similar to method claim 1 . . . Independent claim 21 is directed to a computer implemented method and is very similar to method claim 1"). Accordingly, the Board's improper construction of claims 11 and 21 should be reversed for the same reasons.

II. *Numazaki* Fails to Teach Determining a "Gesture Performed In The Work Volume And Illuminated By The Light Source."

Petitioner relies on the Board's determination of the incorrect claim construction to argue that *Numazaki* "captures an image of the gesture when the lighting unit is on." Response Br. 38-39. *Numazaki* must teach more than capturing

an image of a gesture when the lighting unit is on to render obvious claim element 1[b]. Claim element 1[b] recites, in part, “determining, using the camera, the gesture performed in the work volume and illuminated by the light source.” Appx0044, 13:2-9. As a result, *Numazaki* must teach that the light source is on during the performance of the gesture, not just a single image for a part of the gesture. Further, as discussed above, under a proper claim construction, the gesture is illuminated by the light source at least while the camera is capturing images of the gesture. *See supra* §I.

Petitioner deflects attention away from the fact that *Numazaki* does not teach illumination during the time the gesture is performed by arguing that the term “comprising” creates an “open ended” claim that excuses *Numazaki*’s shortcomings. *See* Response Br. 39-41. *Numazaki* expressly teaches that “lighting unit 101 does not emit the light when the second photo-detection unit 110 is in a photo-detecting state.” Appx0727 (11:25-33) (emphasis added). Further, *Numazaki* provides examples that state the “lighting unit” is not illuminating the “hand gesture” the entire time that the “hand gesture” is being performed or detected. Thus, the FWD’s finding that *Numazaki* teaches claim element 1[b] is not supported by substantial evidence.

Petitioner also argues that natural light can substitute for when the lighting unit of *Numazaki* is turned off. Response Br. 40. That argument fails because the

'079 Patent claims do not require illumination by “natural light;” they require illumination from the claimed “light source.” Accordingly, the Board’s determination that *Numazaki* renders claim 1 obvious should be reversed.

Independent claims 11 and 21 recite limitations that are similar to claim element 1[b]. See Appx0018-Appx0019 (“Independent claim 11 is directed to a computer apparatus and is very similar to method claim 1 . . . Independent claim 21 is directed to a computer implemented method and is very similar to method claim 1 . . . As such, the Petition relies on essentially the same teachings of *Numazaki* discussed above with respect to claim 1 for the features of claims 11 and 21, which we agree . . .”). Thus, the FWD’s findings that *Numazaki* teaches those limitations of claims 11 and 21 are not supported by substantial evidence. Accordingly, the Board’s determinations that *Numazaki* renders claims 11 and 21 obvious should be reversed.

III. *Numazaki* Fails to Teach “Determining, Using The Camera, The Gesture.”

Petitioner contends that the eighth embodiment of *Numazaki* incorporates elements from embodiments 1-7 to fill in the missing relationship between *Numazaki*’s “feature data generation unit” and *Numazaki*’s “photo-detection sensor unit.” Response Br. 44-45. That hindsight-driven interpretation of *Numazaki* is incorrect because *Numazaki*’s “photo-detection sensor unit” is disclosed for the first time in *Numazaki*’s eighth embodiment. *Numazaki*’s embodiments 1-7 do not

disclose a “photo-detector sensor unit.” Accordingly, the Board lacked substantial evidence to equate *Numazaki*’s “photo-detection sensor unit” to anything in *Numazaki*’s embodiments 1-7.

Petitioner argues that Patent Owner incorrectly suggests that the Board incorporated *Numazaki*’s eighth embodiment into *Numazaki*’s first embodiment. *See* Response Br. 47-48. As articulated in the opening brief, Patent Owner did not suggest any such incorporation because *Numazaki*’s “photo-detection sensor unit” is disclosed for the first time in *Numazaki*’s eighth embodiment.

Also as articulated in Patent Owner’s opening brief, *Numazaki* fails to teach or suggest that *Numazaki*’s “feature data generation unit” has access to the image allegedly obtained by *Numazaki*’s “photo-detection sensor unit” (the Board-identified “camera”), as claim element 1[b] requires. For example, there is no figure in *Numazaki* showing the output of *Numazaki*’s “photo-detection sensor unit” (the Board-identified “camera”) being fed to *Numazaki*’s “feature data generation unit.” Petitioner annotates Figures 74 and 75 of *Numazaki* to show the photo-detection sensor units 702 and 704, respectively. Response Br. 46; Appx0693; *see also* Appx0746-0747 (50:25-35, 51:6-15). But neither figure shows the output of its photo-detection sensor unit. There is nothing showing a relationship between *Numazaki*’s “feature data generation unit” and *Numazaki*’s “photo-detection sensor unit.” *See id.* Petitioner annotated Figure 2 of *Numazaki* to explain that the photo-

detection units feed their output to the feature data generation unit to meet claim element 1[b] that requires, in part, “determining, using the camera, the gesture performed in the work volume.” Response Br. 44-45; Appx0044 13:2-9 (emphasis added). Again, there is no disclosure in *Numazaki* regarding the relationship between *Numazaki*’s “feature data generation unit” and *Numazaki*’s “photo-detection sensor unit.” Accordingly, *Numazaki* fails to teach or suggest claim element 1[b], so the FWD’s finding cannot be supported by substantial evidence.

Petitioner argues that the Board properly found that either the “photo-detection sensor unit” of Figure 74 is a camera or the reflected light extraction unit in Figure 2 is a camera. Response Br. 51. But neither the “photo-detection sensor unit” of Figure 74 nor the reflected light extraction unit in Figure 2 is a camera. Petitioner incorrectly argues that *Numazaki*’s Figure 2 teaches a camera that is incorporated into *Numazaki*’s Figure 74. Response Br. 52. *Numazaki*’s “reflected light extraction unit” cannot be the claimed “camera” because it captures an image of the gesture while *Numazaki*’s “lighting unit” is turned off. *See* Appx0727 11:27-34 (“the lighting unit 101 emits the light when the first photo-detection unit 109 is in a photo-detecting state, whereas the lighting unit 101 does not emit the light when the second photo-detection unit 110 is in a photo-detecting state.”) (emphasis added). But under the plain meaning of “determining, using the camera, the gesture performed in the work volume and illuminated by the light source” discussed above,

it would not be possible for *Numazaki*'s "reflected light extraction unit" (the Board-identified "camera") to operate as intended.

Petitioner's argument, that the undisputed fact that *Numazaki*'s subtraction process forms a new image amounts to a "distinction without a difference," is wrong. Response Br. 49-50. The image "formed on the photo-detection plane" is never made available to *Numazaki*'s "feature data generation unit" (the Board-identified component that performs the claimed "determining" step) for any purpose. Rather, multiple images that are formed on the "photo-detection plane" are subtracted from each other to obtain another image that *Numazaki* refers to as the "reflected light image." Appx0727 (11:9-62). The "reflected light image" is not obtained by "photo-detection unit 109," but rather is determined through the subtraction of the two images (captured at different times) on the same "photo-detection plane." *Id.* *Numazaki* does not analyze an image on the "photo-detection plane" to "determin[e] . . . the gesture performed in the work volume," as claim element 1[b] requires. The only purpose of the subtraction process is to form a new image. *See* Appx0727 11:20-61. Accordingly, *Numazaki* fails to teach or suggest claim element 1[b], so the FWD is not supported by substantial evidence. Thus, the Board's determination that *Numazaki* renders claim 1 obvious should be reversed.

Claims 11 and 21 recite limitations that are similar to claim element 1[b]. *See* Appx0018-Appx0019 ("Independent claim 11 is directed to a computer apparatus

and is very similar to method claim 1 . . . Independent claim 21 is directed to a computer implemented method and is very similar to method claim 1 . . . As such, the Petition relies on essentially the same teachings of *Numazaki* discussed above with respect to claim 1 for the features of claims 11 and 21, which we agree . . .”). Thus, the FWD’s finding that *Numazaki* teaches those limitations of claims 11 and 21 is not supported by substantial evidence for the same reasons as claim 1. Accordingly, the Board’s determinations that *Numazaki* renders claims 11 and 21 obvious should be reversed.

Additionally, because the Boards’s finding that claims 1, 11, and 21 are unpatentable over *Numazaki* and the knowledge of a PHOSITA are not supported by substantial evidence, the determination that dependent claims 2, 4-6, 8-10, 12-14, 16, 18-20, 22, 24-26, and 28-30 of the ’079 Patent are unpatentable should be reversed for at least the same reasons.

IV. The Board Improperly Construed Operation of the Light Source in Dependent Claims 3, 15, and 23.

Dependent claim 3 recites, in part, “wherein the light source includes a plurality of light emitting diodes.” Appx0044 (13:12-13). Common sense dictates that the light source includes a plurality of light emitting diodes because the additional light emitting diodes provide more illumination than a single light emitting diode, which assists in determining a gesture. Petitioner fails to identify any plausible reason for why the light source would include a plurality of light

emitting diodes only to have those diodes turned off. *See* Response Br. at 53-56. Instead, Petitioner takes issue with Patent Owner's expert testimony that the specification does not expressly disclose "the timing of when individual LEDs in a multi-LED source should be illuminated." Response Br. 54. The entirety of the cited testimony is reproduced here:

Q. Are you aware of any discussion in the '079 patent that addresses, in any way, the timing of when individual LEDs in a multi-LED light source should be illuminated?

A. Based on my perusal of the specification of the '431, as I sit here now, I have not uncovered any reference to timing of LEDs.

Appx1224 38:3-9.

That testimony is not dispositive for at least two reasons. First, one need look no further than the plain language of the claims to determine that the "light source" illuminates the gesture, not a subset of the "light source." Second, there is no timing associated with the plurality of light emitting diodes—they turned on to illuminate the gesture. There is no requirement that they turn on and off in a sequence that requires timing.

There is no reasonable dispute that the specification discloses "2 LED light sources" as shown in Figure 3 of the '079 Patent. Appx33 Fig. 3 and Appx0039 4:16-17. By having the multiple LEDs emit light at the same time, the object (e.g., finger) performing the gesture will appear brighter, which increases the accuracy of

the gesture recognition. A PHOSITA would interpret claim 3 to require the multiple LEDs of the light source be active at the same time. *See* Appx1379-1380 ¶¶ 40-42. Thus, Petitioner’s argument that light is not emitted at the same time or there is a single light source lacks merit.

Dependent claim 3 includes all the limitations of independent claim 1. 35 U.S.C. § 112(d) (“A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”). Independent claim 1 recites “a light source adapted to direct illumination through a work volume . . . [a] gesture performed in the work volume and illuminated by the light source.” ’079 Patent, claim 1. Accordingly, dependent claim 3 requires that the performed gesture be illuminated by a light source having multiple LEDs that are on at the same time as the performed gesture.

Petitioner incorrectly argues that Patent Owner is importing limitations from the specification to require simultaneous illumination. Response Br. 55. As explained in its opening brief, Patent Owner uses the language of the claims themselves to require simultaneous illumination. Including additional LEDs in the light source that are not used for illumination would be impracticable because doing so would only increase circuit complexity and the cost of the light source with no additional benefit. *See* Appx1379-1380 ¶¶ 40-42.

In view of the foregoing, the Board’s improper construction of claim 3 should be reversed. Dependent claims 15 and 23 are similar to claim 3. *See* Appx0023 (“claim 3 depends from claim 1 and adds ‘wherein the light source includes a plurality of light emitting diodes.’ Claims 15 and 23 add the same limitation to their respective independent claims.”). Accordingly, the Board’s improper construction of claims 15 and 23 should be reversed for the same reasons.

V. The Board’s Determination that Claims 3, 15, and 23 are Obvious is Not Supported by Substantial Evidence.

Petitioner argues that the multiple LEDs of *Numazaki* ’863 do not need to be illuminated at the same time. Response Br. 56-57. Petitioner is incorrect because under a proper interpretation, claim 3 of the ’079 Patent requires that the light source illuminate the gesture by having the multiple LEDs of the light source emit light at the same time. *See supra* §IV and Opening Br. at 27-29. By contrast, the LEDs of *Numazaki* ’863 “are sequentially driven” and only emit light from one LED at a time. Appx0821 16:36-57 (emphasis added). Thus, *Numazaki* ’863 fails to render claim 3 obvious because *Numazaki* ’863, like *Numazaki*, does not teach that the LEDs emit light at the same time for the duration of the gesture performed.

The Board’s determination that the combination of *Numazaki* and *Numazaki* ’863 teaches that the light source is illuminated for the duration of the gesture performed by having the multiple LEDs of the light source emit light at the same time is not supported by substantial evidence. Accordingly, the Board’s

determination that the combination of *Numazaki* and *Numazaki* '863 renders claim 3 obvious should be vacated.

Dependent claims 15 and 23 recite limitations that are similar to dependent claim 3. Appx0023 (“claim 3 depends from claim 1 and adds ‘wherein the light source includes a plurality of light emitting diodes.’ Claims 15 and 23 add the same limitation to their respective independent claims.”) *Compare* claim 3 *with* claim 15 and claim 23. Accordingly, under the proper claim construction, the FWD’s findings that the combination of *Numazaki* and *Numazaki* '863 teach those limitations are not supported by substantial evidence. The Board’s determination that the combination of *Numazaki* and *Numazaki* '863 renders claims 15 and 23 obvious should be reversed.

VI. The USPTO Does Not Have Jurisdiction Over Expired Patents.

Petitioner argues that Patent Owner’s position on the USPTO’s jurisdiction of expired patents is incompatible with this Court’s precedent. Response Br. 57-60. But first, the *Oil States* decision is Supreme Court precedent, which is controlling on this Court. *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1373 (2018) (“[P]atents are public franchises that the Government grants to the inventors of new and useful improvements.”) And second, before *Oil States* this Court recognized the importance of protecting the Article III jurisdiction of patent rights:

It is essential, therefore, to clarify the line between public and private rights. Under current Supreme Court precedent, that line remains hazy, in particular in connection with patent rights. Yet, as the administrative state expands and non-Article III tribunals adjudicate more disputes under the cover of the public rights doctrine, there must be vigilance in protecting Article III jurisdiction. Each new tribunal outside of Article III should be greeted with skepticism. Rigorously defending Article III's protections is among our most important duties, for there exists no other voice to guard against legislative and executive excess.

See, e.g., Cascades Projection LLC v. Epson Am., Inc., 864 F.3d 1309, 1325 (Fed. Cir. 2017).

Oil States clarified that *inter partes* review is available for the grant of a patent, which is a matter involving public rights. When a patent expires, there is no longer a public franchise, and administrative agencies, including the USPTO, may not take away from or share with Article III jurisdiction.

When a patent expires, the public franchise ceases to exist and the franchisee (e.g., the patent owner) no longer has the right to exclude others. At most, the franchisee may be entitled to collect damages from the public franchise that formerly existed through an infringement action in an Article III jurisdiction. The USPTO's *inter partes* review process does not have jurisdiction over a petition against an expired patent because the public franchise no longer exists after patent expiration.

Petitioner mistakenly argues that “the *inter partes* review process directly determines whether the patent owner is allowed to exercise” the exclusionary rights provided by the patent, including damages for past infringement. Response Br. 59.

Article III courts directly determine whether a patent owner is allowed to exercise the rights of an expired patent for past infringement damages—there is no need for the USPTO to have jurisdiction over expired patents via the *inter partes* review process. Because the public franchise ceased to exist when the '079 Patent expired, the USPTO had nothing in its authority to cancel or amend the expired '079 Patent. *See Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365, 1373 (2018).

Petitioner's arguments regarding *Sony Corp. v. Iancu* are inapposite because the patent in that case expired in 2017, after the 2016 petition for *inter partes* review. *See* Response Br. 57-59; 924 F.3d 1235, 1239-41 (Fed. Cir. 2019). Patent Owner is not arguing that Article III courts do not have jurisdiction over expired patents. Patent Owner argues that the USPTO's *inter partes* review process does not have jurisdiction over patents that expire before a petition is filed. Petitioner's citation to footnote 1 of *Sony Corp. v. Iancu* by Judge Dyk might be relevant if the parties were arguing whether there is a live case or controversy to satisfy Article III, but the instant issue is whether the USPTO has jurisdiction over a petition against an expired patent in an *inter partes* review. Thus, Petitioner's arguments concerning whether this Court has jurisdiction over an expired patent are irrelevant.

Petitioner also argues that the statutes governing *inter partes* review do not mention a patent expiration date as being relevant to the availability of review.

Response Br. 59. But it is *Oil States* that establishes the legal authority preventing the USPTO's jurisdiction of a petition against an expired patent for *inter partes* review. Similarly, Petitioner states that 35 U.S.C. § 2(a)(1), 35 U.S.C. § 311, and 35 U.S.C. § 315 do not mention or suggest expired patents. Response Br. 60. And again, *Oil States* provides the necessary legal authority. Moreover, there is no statute that expressly states the USPTO has jurisdiction over expired patents in an *inter partes* review.

At bottom, the Board does not have jurisdiction over the '079 Patent because the '079 Patent expired in November 2019, long before the Petition was filed in April 2021. Thus, the FWD should be vacated.

CONCLUSION AND RELIEF SOUGHT

For the foregoing reasons, Appellant respectfully submits that the Court should reverse the Board's final written decision in IPR2021-00922. And Patent Owner respectfully submits that the final written decision in IPR2021-00922 should be vacated because the Board does not have jurisdiction over expired patents.

Dated: December 18, 2023 Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court of the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on December 18, 2023.

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Dated: December 18, 2023

/s/ Fred I. Williams
Fred I. Williams

FORM 19. Certificate of Compliance with Type-Volume Limitations

Form 19
July 2020

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATIONS

Case Number: 2023-1463

Short Case Caption: Gesture Technology Partners, LLC v. Apple Inc.

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